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By GEORGE C. STEYSKAL

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NOTES ON FLIES CAPTURED IN TREETOPS IN MALAYA (DIPTERA: EMPIDIDAE, NERIIDAE, PLATYSTOMATIDAE, SEPSIDAE, MUSCIDAE)

By GEORGE C. STEYSKAL [1]

An unusually interesting lot of Diptera captured on treetop platforms in the Selangor Gombak Forest Reserve, Malaya, by Dr. H. Elliott McClure, of the U.S. Armed Forces Institute of Pathology, was presented to this author for determination. The following notes are the result. All specimens are deposited in the collections of the United States National Museum (USNM).

The following abbreviations, referring to leg parts, chaetotaxy, and wing veins, have been used throughout: *a*=anterior, *acr*=acrostichal, *ad*=anterodorsal, *av*=anteroventral, *cx*=coxa or coxae (cx_1=forecoxa, etc.), *d*=dorsal, *dc*=dorsocentral, *f*=femur or femora (f_1=forefemur, etc.), *fo*=fronto-orbital, *h*=humeral, *mspl*=mesopleural, *ntpl*=notopleural, *p*=posterior, *pa*=postalar, *pd*=posterodorsal, *ppl*=propleural, *pra*=prealar, *prs*=presutural, *prsc*=prescutellar, *pv*=posteroventral, *sa*=supra-alar, *sc*=scutellar, *sl*=sublateral, *stpl*=sternopleural, *t*=tibia or tibiae (t_1=foretibia, etc.), *ta*=anterior crossvein, *tp*=posterior crossvein, *v*=ventral, *vti*=inner vertical.

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Family Empididae

Hybos melanauges, new species

FIGURES 1*a–e*

MALE.—Length of body 3 mm; wing 3.25 mm.

Color black, only basitarsi brownish. Sides of thorax, posterior part of mesonotum, and coxae, with thin white pruinosity; middle of mesonotum shining with very little microsetation; bristles black; hairs of coxae, dorsal side of f_1 and f_3, and abdomen white.

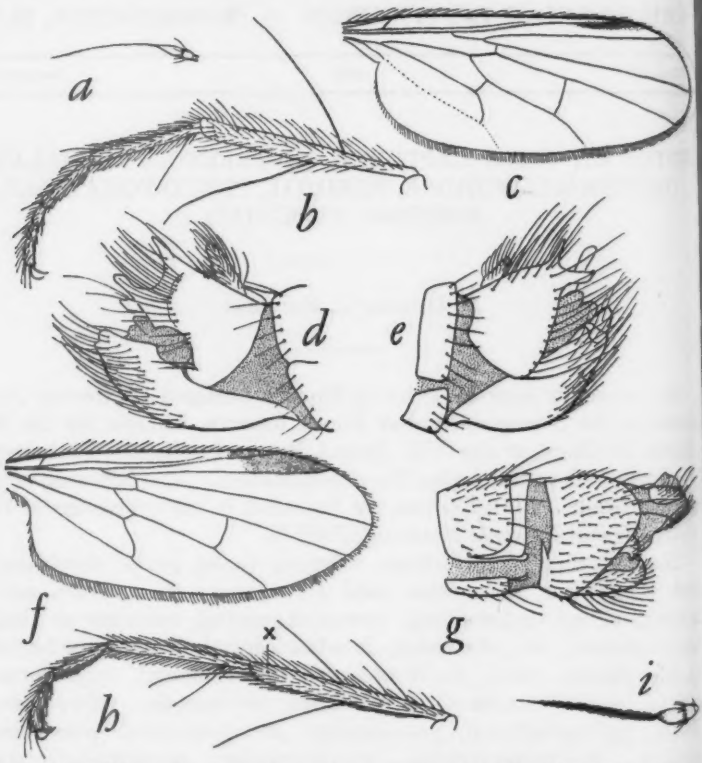

FIGURE 1.—*Hybos melanauges*, new species: *a*, antenna; *b*, right middle tibia and tarsus, anterior view; *c*, wing; *d*, postabdomen, right side; *e*, postabdomen, left side. *Hybos meracrus*, new species: *f*, wing; *g*, tip of abdomen; *h*, right middle tibia and tarsus, anterior view (x=position of bristle on posterior side); *i*, antenna.

Head with eyes contiguous above, ommatidia of upper half approximately twice as large as lower ones; antenna as in figure 1*a*, arista

bare; proboscis slightly shorter than height of head; palpi a little shorter than proboscis, very slender, with only one rather small apical bristle.

Thoracic chaetotaxy: 2 *ntpl*, 1 *pa*, 1 *dc* (also a few small anterior dorsocentral hairs), 1 *acr*, 1 *sc; pa, dc, acr* in transverse line some distance anterad of scutellum.

Wing (fig. 1*c*) hyaline, with poorly developed brown stigma; halter pale yellowish.

Legs slender; f_3 somewhat clavate, at apical third 0.15 as wide as long. Bristles of legs as follows: t_1 with one short median *d* and one long preapical *ad;* t_2 as in figure 1*b;* f_3 with complete row of 16–17 staggered *av*, mostly approximately as long as femoral diameter, in apical half with 3–4 *pv;* t_3 with one long median *ad*, followed a short distance apicad by a smaller *d*, one *ad* at apical 1/7, and one each *ad* and *pd* preapicals; t_1 with basiventral basitarsal bristle and each tarsal segment of all tarsi with more or less distinct preapical *ad* and *pd;* basitarsus$_2$ with a secondary basiventral and 2 median *pv;* basitarsus$_3$ slightly enlarged.

Abdomen with sparse whitish hairs of moderate length; postabdomen (fig. 1*d–e*) scarcely greater in diameter than preabdomen, dorsal valves each with 2 apical processes and rows of black bristly hairs.

HOLOTYPE.—Male, Malaya, Selangor Gombak Forest Reserve, tree platform, February 24, 1962 (H.E. McClure), USNM 67631.

This species runs in Frey's key (1953, pp. 57–71) to *H. nigronitidus* Brunetti, described from northern India and recorded by Frey from northeast Burma; it differs therefrom by its lack of "stiff hairs" on the humerus, narrowly brown knees (except possibly on middle legs), pale hairs on the under side of the tarsi, and "wollig weissliche Behaarung" [wooly whitish hairs].

Hybos meracrus, new species

FIGURES 1*f–i*

FEMALE.—Length of body 3 mm; wing 3.25 mm.

Head, thorax, and abdomen shining black; legs, including coxae, yellowish, all knees narrowly piceous; t_1 dark drown dorsally; f_3 blackish above in apical 0.15; apical tarsal segments brown.

Head with eyes contiguous above, ommatidia of upper half twice as large as lower ones; antenna (fig. 1*i*) black, arista short plumose; proboscis brown, slightly shorter than height of head; palpi nearly as long as proboscis, slender, black, bearing a few small bristles at and near apex.

Thorax with pale gray pruinosity on sides and in humeral grooves; mesonotum with scanty grayish pruinosity laterally; mesonotum posteriorly and scutellum and metanotum with somewhat denser

yellowish microsetation; middle of mesonotum with very scant and minute microsetation; strong blackish bristles as follows: 1 *ntpl*, 1 *as*, 1 *dc*, 1 *acr* (prescutellar); all other thoracic setae hairlike, yellowish.

Wings (fig. 1*f*) pale brownish with deep brown stigma; venation as shown; halter pale yellowish.

Legs slender, f_3 somewhat clavate, at apical fourth 0.12 as wide as long; coxae and most of legs with pale yellowish hairs; *f* and *t* with bristles as follows: t_1 with one long median *d* and one long preapical *ad*, also with nearly erect fine ventral hairs nearly as long as tibial diameter; t_2 (fig. 1*h*) including one *p* of moderate length at position indicated by *x*; f_3 with complete row of 9 *av*, longest (median) somewhat longer than greatest diameter of femur; also 2 *ad*, one slightly apicad of middle and one at apical ¼; t_3 with one *d* shortly apicad of middle and one each *a* and *pd* preapicals; tarsi with moderately long hairs, one basiventral bristle on basitarsus$_1$ and basitarsus$_2$, each segment of all tarsi with more or less distinct preapical *ad* and *pd*; basitarsus$_3$ slightly enlarged.

Abdomen with sclerites black, lightly grayish pruinose and with sparse whitish hairs of moderate length; terminal segments (fig. 1*g*) with bristles black.

HOLOTYPE.—Female, Malaya, Selangor Gombak Forest Reserve, tree platform, February 24, 1962 (H. E. McClure), USNM 67632.

This species runs in Frey's key (1953) to *H. apicalis* Frey, but differs by having f_3 with less black apically and the upper ommatidia enlarged, or to *H. annulipes* Frey, from which it differs also in its differently colored f_3 and the differently bristled t_2. Both of those species are from Burma. If one considers the 2nd wing vein sufficiently bowed apically to place this species in Frey's subgenus *Pseudosyneches*, it would run to *H. palawanus* Frey, differing therefrom by its hairy arista and by the presence of only 2 bristles on f_3.

Family Neriidae

The following key is offered in the hope that it will be found an improvement over the one by Aczél (1954, p. 511).

Key to Asiatic Genera of Subfamily Neriinae

1 (4). Antennal socket largely unpolished, matt or at most with slightly greasy appearance; only 1 *ntpl*.

2 (3). Third antennal segment short oval with acute tip blending directly into apical, densely white-felted arista; tips of t_1 and all *f* of ♂ distinctly clavate; large species . . . . . **Rhoptrum** Enderlein

3 (2). Third antennal segment oval to long oval, with rounded tip; tip of t_1 and all *f* of ♂ ordinary, never clavate or swollen; *vti* usually weakly developed, short and hairlike; smaller species . . **Telostylinus** Enderlein

4 (1). Antennal socket polished, strongly shining.

5 (8). Two strong equal *fo*; anterior *ntpl* strong; 4th wing vein strongly bowed downward before *ta*, 1st basal cell at widest part therefore nearly twice as wide as length of *ta*; occiput and prothorax weakly developed.

6 (7). Stump veins on 3rd and 4th veins; anterior *dc* strong; f_1 of ♂ with small spinules below . . . . . **Stypocladius** Enderlein

7 (6). Stump veins lacking; anterior *dc* very small; f_1 of ♂ with very heavy spines on small tubercles . . . . . **Nipponerius** Coquillett

8 (5). Only one weak *fo* and sometimes anterior thereto another rudimentary one; anterior *ntpl* usually very weak; 4th wing vein only gently bowed basad of *ta*, 1st basal cell therefore only slightly wider than length of *ta*.

9 (10). Occiput and prothorax greatly lengthened, occiput nearly or quite as long as eye . . . . . **Gymnonerius** Hendel

10 (9). Occiput and prothorax little lengthened, occiput much shorter than eye. **Paranerius** Bigot

Neither Aczél nor I have been able to place *Protonerius* Meijere (1924, p. 29) in our keys.

Subfamily Telostylinae

This subfamily is distinguished from the Neriinae by the lack of a distinct dorsal expansion of the facial plate at the bases of the antennae. The genus *Telostylus* Bigot, 1859 (type: *T. binotatus* Bigot, 1859) is distinguished from the two other known genera by having only 1 *ntpl* and 1 (prescutellar) *dc*, a long and pointed 3rd antennal segment, and by the basitarsus$_1$ of the ♂ sometimes being swollen.

Nobody so far has had the temerity to offer a key to *Telostylus*. The following one is offered as a preliminary contribution since it is constructed largely from descriptions—although *T. philippinensis* Cresson has been placed from examination of the type specimen in the USNM, and *T. niger* Bezzi, from material in the USNM collected by Baker and apparently part of the original lot. Aczél's statement (1955, p. 32) that *T. binotatus* Bigot is known only from Borneo is erroneous, since the original description cites Celebes only, and Aczél's redescription from Borneo specimens must therefore be suspect. Specimens of *T. binotatus* that agree well with Bigot's description and the concept here presented were taken in the Selangor Gombak Reserve by McClure on October 21, 1961 and October 27, 1962.

Key to Species of *Telostylus* Bigot

1 (4). Mesofrons between the eyes dull black all the way across; mesonotum, scutellum, and pleura largely or wholly black; halter yellow.

2 (3). Legs yellow with preapical dark bands; 3rd antennal segment largely yellowish; dull black supra-alar spot present; wing length 3.75 mm; basitarsus$_1$ of ♂ not broadened (Philippine Islands) . . **T. niger** Bezzi

3 (2). Legs black; 3rd antennal segment black; mesonotum wholly shining black; wing length 5.5 mm; ? ♂ basitarsus$_1$ broadened (type ♀, Sumatra and Thailand) . . . . . **T. apicatus** Edwards

4 (1). Mesofrons between the eyes more or less yellowish or reddish medially; halter yellow (except in *T. remipes*).

5 (6). Mesonotum and pleura wholly blackish; f_1 yellow brown, f_2 missing in type; 3rd antennal segment black, except at base; wing length 5 mm (Thailand) . . . . . **T. inversus** Hennig

6 (5). Mesonotum variegated with brownish or blackish stripes or spots or largely yellowish; pleura with considerable yellowish color.

7 (8). Wing span 5.5 lines (=11.5 mm); body length 3.5 mm; halter black; *f* yellowish with black tips; ♂ basitarsus$_1$ broadened (Macassar). **T. remipes** (Walker)[1]

8 (7). Wings 4–4.5 mm. long; legs yellowish, *f* with black tips and sometimes dark preapical bands.

9 (12). Mesonotum yellowish without median marks, only intrahumeral and supra-alar black marks; f_2 with blackish tips; 3rd antennal segment with extreme tip blackish; scutellum yellow; abdomen yellowish or reddish.

10 (11). Pleura with large blackish mark above cx_1; mesonotum with large intrahumeral spot and posterior thereto a small presutural spot (Philippine Islands) . . . . . **T. philippinensis** Cresson

11 (10). Pleura with 3 blackish marks (Taiwan) . . **T. decemnotatus** Hendel

12 (9). Mesonotum with median dark marking and often other stripes and spots.

13 (14). Mesonotum with median stripe only; f_1 blackish in apical third, f_2 of type missing (Ceylon) . . . . . **T. latibrachium** Enderlein

14 (13). Mesonotum with dark markings besides median stripe.

15 (16). Black supra-alar spot lacking; f_2 dark brownish, base and preapical band yellow; mesonotum yellowish with pair of presutural black spots; wing length 4 mm (Celebes; Malaya; ?Borneo) . . **T. binotatus** Bigot

16 (15). Black supra-alar spot present.

17 (18). Pleura yellowish in anterior half, dark brown posteriorly; abdomen blackish brown; scutellum wholly black, lateral pair of bristles very small; f_1 with apicodorsal blackish mark (islands off Sumatra). **T. babiensis** Meijere

18 (17). Pleura wholly yellowish or with 1–3 black spots; scutellum more or less reddish medially; 3rd antennal segment black.

19 (20). Pleura with 3 distinct black spots; *f* without preapical dark marks; 3rd antennal segment black in apical half; abdomen with blackish central stripe (Philippine Islands) . . . **T. maccus** Osten-Sacken

20 (19). Pleura wholly yellowish or with one indistinct blackish mark between cx_1 and cx_2; at least f_2 with preapical dark band; abdomen blackish brown (Krakatoa; Java; so. India) . . . **T. trilineatus** Meijere

Family Platystomatidae

Plagiostenopterina Hendel

Subgenus *Meringomeria* Enderlein

Meringomeria Enderlein, 1924, Mitteil. Zool. Mus. Berlin, vol. 11, p. 108.—Bezzi, 1928, Dipt. Fiji Is. (Brit. Mus.), p. 98.—Hennig, 1941, Arb. Morphol. Taxon.

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[1] These are the only differentiating characters I can glean from Walker's short description as *Coenurgia remipes* (1859, p. 164).

Entom. Berlin-Dahlem, vol. 8, p. 21.—Frey, 1964, Notulae Ent., vol. 44, p. 19.

Stenopterella Malloch, 1931, Proc. U.S. Nat. Mus., vol. 78, no. 15, pp. 13, 16.

Enderlein designated *Plagiostenopterina trivittata* (Walker) as type of *Meringomeria*, although he also included *P. aenea* (Wiedemann), which is the type of *Plagiostenopterina*. Malloch cited *P. trivittata* also as the type of *Stenopterella*, distinguishing it from other segregates of *Plagiostenopterina* in a key and included therewith also *P. marginata* (Wulp) and a new species, *P. trivittigera* Malloch. Hennig and Frey have indicated the synonymy of *Stenopterella*. The nature of the "spiracles" of the 4th and 5th tergites of the female, well within the sclerotic margins, would seem doubtful, but a macerated specimen of *P. trivittata* does indeed show large ramose tracheae connected with them. I prefer to maintain *Meringomeria* as a subgenus and offer the following key to include all of the species that can be brought into it at this time, although information on the position of spiracles of the ultimate preabdominal segments is not available for *P. neurostigma* Bezzi, *P. pallidipes* Frey, and *P. olivacea* Hendel.

Key to Species of *Plagiostenopterina* Subgenus *Meringomeria*

1 (2). Wing with cloud about *tp* and isolated spot anterad thereof dark brown; costal cell hyaline . . . . . **P. neurostigma** Bezzi

2 (1). Wing without such markings.

3 (8). Mesonotum lightly clayey-yellow pruinose without shining longitudinal vittae.

4 (5). *Cx* and *f* dark brown; ♀: spiracles of 5th tergite far mesad of lateral margins, but somewhat closer thereto than to each other and near posterior margin . . . . . **P. marginata** (Wulp)

5 (4). Femora nearly wholly yellow.

6 (7). Mesonotum with distinct blackish *dc* lines interrupted at suture; abdomen wholly greenish . . . . . **P. olivacea** Hendel

7 (6). Mesonotum without such lines, with only faint traces of brownish *dc* lines; abdomen with yellowish transverse bands; ♀: spiracles of 5th tergite close to lateral margins . . . . **P. leytensis**, new species

8 (3). Mesonotum with pair of longitudinal shining stripes.

9 (10). Pruinosity of mesonotum whitish, rather light; *cx* and *f* blackish; ♀: spiracles of 5th tergite distant from lateral margins, twice as far from each other as from posterior margin . . . **P. planidorsum** (Walker)

10 (9). Pruinosity of mesonotum yellowish, heavy; at least f_3 largely yellowish.

11 (14). Costal cell hyaline.

12 (13). Base of abdomen wholly greenish; costal wing margin from stigma to end of 4th vein with continuous brown seam; ♀: spiracles of 5th tergite? . . . . . **P. pallidipes** Frey

13 (12). Base of abdomen yellowish; wings with apical spot isolated from dark brown stigma by hyaline space; ♀: spiracles of 5th tergite only their diameter from each other and from posterior margin.

P. hebes Hendel

14 (11). Entire costal margin of wing from root to end of 4th vein with brown seam; abdomen wholly greenish.

15 (16). Shining mesonotal vittae gradually tapered posteriorly; abdomen with dense, yellow pruinose anterior tergal margins; ♀: spiracles of 5th tergite near anterior margin, only twice their diameter from each other, surface of tergite dull . . . . . **P. trivittata** (Walker)

16 (15). Shining mesonotal vittae tapered rather suddenly at posterior end; pruinose tergal margins of abdomen faint; ♀: spiracles of 5th tergite near posterior corners, widely separated, surface of tergite shining. **P. trivittigera** Malloch

Plagiostenopterina (*Meringomeria*) *hebes* Hendel

Plagiostenopterina hebes Hendel, 1914, Abhandl. Zool.-Bot. Ges. Wien, vol. 8, p. 70.

The type and only described specimen is a male from Singapore. McClure captured a female on the Selangor Gombak tree platform, on May 7, 1961, which agrees very well with Hendel's description. Spiracles of 5th tergite as in preceding key, those of 4th tergite near posterior corners; front dull blackish with very narrow shining median longitudinal stripe and many black hairs; abdomen shining, lightly transversely carinulate, and with black hairs on all dark parts, whitish hairs at the yellowish base.

Plagiostenopterina (*Meringomeria*) *leytensis*, new species

FEMALE.—Length of wing 6.5 mm.

Head brownish yellow; antennal grooves and pair of ill-defined occipital spots piceous; 3rd antennal segment, palpus, and front brown. Hairs of front whitish to yellowish. Medifrons wholly dull.

Thorax largely brownish; middle of mesonotum, mesopleuron, and sternopleuron metallic greenish; nearly entire thorax covered with moderately dense whitish tomentum or coarse pruinescence, that on mesonotum uniform and not showing shining stripes, but with a trace of brownish dorsocentral lines; all hairs whitish to yellowish, except a few black ones on anterodorsal corner of mesopleuron and adjacent humerus; all bristles black.

Legs with all *cx* and *f* yellowish, only f_3 with small black anteroapical spot; *t* black, only basitarsus$_3$ brown. Bristles of *cx*, *d* and *v* rows of f_1, and 6–8 bristles and several hairs on dorsal third of f_3 black; all other vestiture of *f* (hairs) whitish.

Wings light yellowish hyaline, entire costal margin from root to tip of 4th vein with dark brown seam, broadest near tip of wing. Basal 4/5 of 2nd basal cell and basal half, except narrow strip along anterior edge, of anal cell bare. Squamae and their fringes whitish. Halter blackish.

Abdomen metallic greenish black; compound 1st dorsal segment with transverse pruinose yellowish band in 3rd quarter; basal 2/5

of next 2 segments and diffuse basal part of last (5th) preabdominal segment yellowish; entire 5th tergite pruinose; yellowish parts and entire 5th tergite covered with whitish pile; apical part of basal tergite and dark apical parts of 3rd and 4th tergites covered with moderately dense and long, recumbent rufous hairs; spiracles of 4th tergite narrowly within apical corners of tergite; those of 5th tergite narrowly within lateral margins of tergite opposite base of ovipositor; basal segment of ovipositor piceous, with many erect whitish hairs.

HOLOTYPE.—Female, Tacloban, Leyte, Philippine Is. (Baker), USNM 67978.

This species, as shown in the preceding key, is apparently most closely related to *Plagiostenopterina marginata* (Wulp) and to *P. olivacea* Hendel, should the latter be found definitely to belong to *Meringomeria*.

Plagiostenopterina (Meringomeria) planidorsum (Walker)

Charax planidorsum Walker, 1860, Trans. Ent. Soc. London (new series), vol. 5, p. 325.—Hendel, 1914, Genera Insectorum, fasc. 157, p. 50; 1914, Abhandl. Zool.-Bot. Ges. Wien, vol. 8, p. 53.

Plagiostenopterina (*M.*) *planidorsum* (Walker).—Frey, 1930, Notulae Ent., vol. 10, p. 51.

One pair, Selangor Gombak Forest Reserve, tree platform, ♀ Nov. 10, 1962, ♂ Jan. 19, 1963. Walker described a female from Burma, Hendel expressed an opinion that the species might be related to *P. trivittata* (Walker), and Frey made the combination and recorded the species from Palawan. The Malayan specimens agree well with Walker's description and are indeed close to *P. trivittata* (see key, p. 7).

Plagiostenopterina (Meringomeria) trivittigera Malloch

Plagiostenopterina (*Stenopterella*) *trivittigera* Malloch, 1931, Proc. U.S. Nat. Mus., vol. 78, no. 15, p. 17.

Selangor Gombak Forest Reserve, tree platform, 2 ♂, 1 ♀, May 7, 1961; 2 ♀, May 13, 1961; 1 ♀, Sept. 29, 1962. These are apparently the second recorded captures. The specimens agree well with the type from Singapore in the USNM.

Family Sepsidae

Dicranosepsis coryphea, new species

FIGURES 2*a–f*

MALE.—Length of body 3.4 mm; wing 2.5 mm.

General color metallic purplish black; propleura reddish brown; labellae and most of legs yellowish; f_2 and f_3 becoming dark brown apically; base and apex of t_3 brown; apical swollen part of t_3 black;

apical 2 or 3 segments of all tarsi brown; basimesal spot on 3rd antennal segment reddish brown.

Head (fig. 2*e*): front shining, at antennae 0.66 as broad as at level of anterior ocellus; cheeks very narrow, without outstanding posterior bristle; 3 moderately developed vibrissae.

Thorax with mesonotum very lightly brownish pruinose; with the following white pruinose areas: anterior part of humeral grooves,

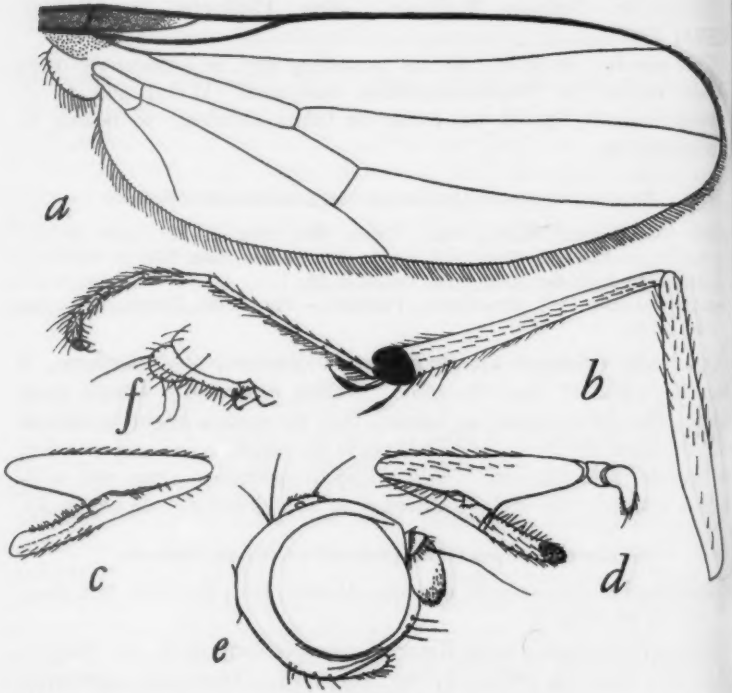

FIGURE 2.—*Dicranosepsis coryphea*, new species: *a*, wing; *b*, middle leg, posterior view; *c*, forefemur and tibia, anterior view; *d*, foreleg, less tarsus, posterior view; *e*, head, profile view; *f*, male abdomen, apex.

lateral stripe on notopleuron, stripe above cx_1 on propleuron and for only a short distance on sternopleuron, posterior half of sternopleuron, entire hypopleuron (lightly). Chaetotaxy: 1 *h*, 2 *ntpl*, 1 *sa*, 2 *dc*, 2 *sc*, 1 *mspl*.

Wing pale brownish hyaline, at root and in humeral and larger part of costal cell dark brown; venation as in figure 2*a*; halter yellowish; squama and its long cilia yellowish.

Legs (figs. 2*b–d*): cx_1 C-shaped, with heavy pilose ventral projection (fig. 2*d*); f_1 with strong triangular median projection and without basal hairs or bristles (figs. 2*c*, *d*); f_2 and f_3 with bristles; f_3 moderately swollen (fig. 2*b*); t_2 with ventral bristle near tip, latter shining black, dilated into 2 roundish tubercles and with 3 curved, preapically compressed and broadened bristles (fig. 2*b*).

Abdomen smooth and shining; segment 3 strongly constricted basally; segment 2 without strong bristles; segment 3 and posterior segments with well-developed bristles, most of which are approximately half as long as apical epandrial pair (fig. 2*f*). Postabdomen black, processes of epandrium each ending in pair of slender, mesally directed prongs.

HOLOTYPE.—Male, Malaya, Selangor Gombak Forest Reserve, tree platform, Oct. 20, 1962 (H.E. McClure), USNM 67579.

This species is evidently close to *Dicranosepsis bicolor* (Wiedemann), a taxon including a number of entities that Hennig has considered to be members of a "Formengruppe." The peculiar modification of t_2 in *D. coryphea* has not been mentioned in connection with any of the other forms or related species.

The genus *Dicranosepsis* Duda has been placed by Hennig as a synonym or possible subgenus of the neotropical genus *Palaeosepsis* Duda, but the relationships and rank of these taxa need further study and at present I prefer to consider them as distinct genera.

Family Muscidae

Dichaetomyia prolixa (Walker), new combination

Aricia prolixa Walker, 1864, Journ. Proc. Linn. Soc. London, vol. 7, p. 218.
Spilogaster prolixa (Walker).—Stein, 1901, Zeits. Hym. Dipt., vol. 4, p. 205.
Mydaea prolixa (Walker).—Stein, 1918, Ann. Mus. Nat. Hung., vol. 16, p. 185.—Séguy, 1937, Genera insectorum, fasc. 205, p. 289 (in list of "species dubiae vel incerti generis").

One female, Selangor Gombak Forest Reserve, tree platform, Dec. 23, 1962, agrees well with Walker's description. The species is rather characteristically colored, mesonotum reddish with broad central blackish stripe stopping at yellowish scutellum, abdomen largely yellowish with posterior margins of tergites 3 and 4 rather broadly blackish, and tergite 5 with a pair of well-developed, oval, black lateral spots, legs with all *f* and t_1 and t_2 yellowish, and all tarsi blackish; 4 postsutural *dc* bristles.

Although clearly a *Dichaetomyia*, the species is not to be found in Malloch's keys (1925a, p. 324; 1925b, p. 323) nor in his key of 1929 (p. 401), where it runs to *D. rufa* (Stein), a species with a wholly reddish mesonotum.

Genus *Fraserella*, new name

Fraseria Malloch, 1932, Ann. Mag. Nat. Hist., vol. 10, no. 10, p. 309 [type by original designation: *F. fulvomaculata* Malloch]—Séguy, 1937, Genera insectorum, fasc. 205, p. 378. [Preoccupied by *Fraseria* Bonaparte, 1854 (Aves).]

Both Malloch and Séguy have referred this genus to the Muscinae, although it is not very conformable therein. The thoracic squama, being in close contact with the base of the scutellum and with straightish apical margin, would seem to indicate such a reference. In Séguy's key (1937, p. 370), the type species traces easily by its hairy eyes; the two additional species I am including at this time, however, have eyes that are scarcely hairy at all and will therefore run to *Mesembrina* or *Muscina*. Malloch, in his unpublished key to world genera of Muscidae (now on file in USNM), compares *Fraseria* to *Mesembrina* and distinguishes the former by its bare pteropleuron. Malloch, however, also brings out *Fraseria* in two other places, comparing it in the first instance with *Bryantina* and *Balioglutum* (distinguished from those genera by its wholly hairy arista, lack of any seta on wing veins except costa, and 4 postsutural *dc*) and in the other instance with *Gymnodia* (distinguished by plumose arista and strong presutural *acr*). *Fraserella* resembles *Muscina* in many respects, but the flattish abdomen and quite differently bristled legs, including a distinct calcar, of *Muscina* separate it from *Fraserella*.

The new species described below is not very similar to *F. fulvomaculata*, but it fits no better with any other genus than *Fraserella* and hardly seems distinct enough to require a new genus. I am indebted to Roger W. Crosskey, Commonwealth Institute of Entomology, London, for notes on the type of *F. fulvomaculata* and for pointing out that *Phaonia corbetti* Malloch should also be referred to *Fraserella*. The development of the latter species was described by J. S. Sewill (1931, pp. 233–235) as taking place in the inflorescence of nipa palms and it is possible that the new species has a similar habitat.

Fraserella altivolans, new species

FIGURES 3, 4

MALE.—Length of wing 8.25–8.5 mm.

Color generally black; 1st, 2nd, and base of 3rd antennal segments reddish; oral margin between vibrissae reddish; infraocular bare area brownish; all bristles and hairs black, except very short whitish marginal cilia of thoracic squama.

Head proportions (fig. 3*c*): front at narrowest part 0.115 of total width of head; medifacies strongly narrowed at insertion of vibrissae; arista as in figure 3*d*, long plumose; anterior ommatidia approximately twice as great in diameter as posterior ones; bristles and hairs similar

to those of female (fig. 3*b*); occipital ocular margin bare, whitish pruinose.

Thorax with changeable pruinosity, when viewed from rear with central stripe, stripes in lines of *dc* bristles, and broad lateral areas, grayish. Chaetotaxy: 4 *h* in row; 2 *ntpl;* 1 *sl;* 1 *prs;* 1 small *pra* and 3 strong *sa*, 3 *pa;* 2 small posterior *ia;* 2+4 *dc;* 3 strong presutural *acr* and several much smaller and finer pairs of postsutural *acr* ending in row of 6 strong *prsc;* 6 marginal *sc;* 1 *ppl* and 1 strong stigmatal, each accompanied by a group of long strong bristly hairs, 1+2 *stpl*, the posterior 2 close together; complete row of about 18

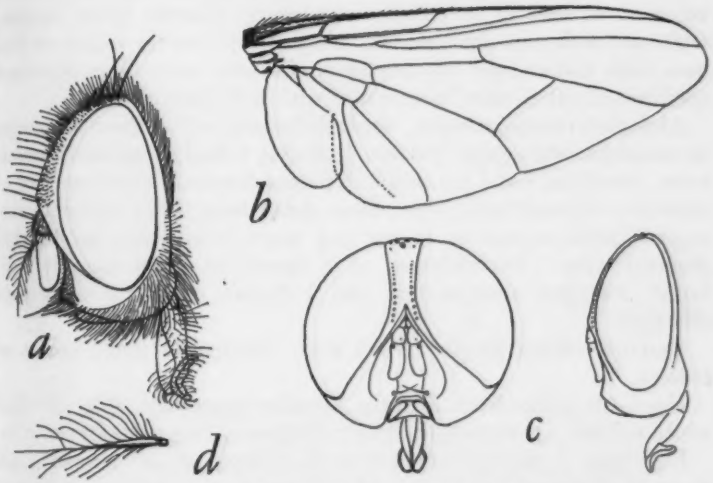

FIGURE 3.—*Fraserella altivolans*, new species: *a*, female head, profile; *b*, male wing; *c*, diagrammatic male head, anterior and lateral views; *d*, male arista.

posterior *mspl*. All thoracic hairs long and coarse, only the following areas bare: prosternum, center of propleuron, oblique stripe from center of mesopleuron to just posterad of cx_1, pteropleuron, hypopleuron, supra-alar and postalar declivities (except a few small hairs just below *pa*), suprasquamal ridge, lower surface of scutellum, metanotum. Sides of scutellum with many coarse hairs.

Legs simple, only f_3 quite slender in apical fourth; claws and pulvilli moderate in size. Chaetotaxy: f_1 with 2 complete rows of *pd*, 1 complete row of long *pv;* t_1 with short median *p* and many short *ad;* f_2 with 5 *pv* shorter than femoral diameter, about as many *av* only half as long as *pv*, and 3 closely adjacent preapical *pd;* t_2 with 2 *p* in apical half, 1 *d* and 4 *v* preapicals; f_3 with complete comb of densely placed disticlinate bristly *ad* hairs about as long as femoral

diameter, complete row of about 20 *av* (about 5 of which definitely bristles, others hairlike), a series of *pv* bristly hairs in basal half similar to *av* series; t_3 with 5 median *av* somewhat shorter than tibial diameter, some bristly *pd* hairs (a slightly larger one at apical third might be called calcar), distinct apical *d* and *av*, other apicals no larger than surrounding bristly setae. T_3 is distincly compressed on apical half of posterior surface and is furnished with a narrow but deep sulcus in *pd* middle half. Cx_3 bare at apex above.

Wing (fig. 3*a*) hyaline; veins brown to black, only swollen base of costa as far as humeral crossvein yellowish; tegula and basicostal scale black; alar squama with blackish margin; thoracic squama closely adjacent to base of scutellum, with nearly straight apical margin, white and with very short whitish marginal cilia; costal vein at swollen base with rather long bristles, otherwise with very short depressed spinules; all other veins bare; halter with dark brown knob.

Abdomen rotund, swollen, covered dorsally with yellow pruinosity in somewhat changeable pattern, giving it a finely peppered appearance, except on basal 2/3 of 1st apparent tergite. Whole surface of abdomen covered with fairly dense decumbent hairs, marginal segmental hairs somewhat longer and more bristle-like; 1st ventral segment hairy. Postabdomen as in figures 4*a–c*; 5th sternite with broad, V-shaped emargination and 2 digitate apical protuberances (fig. 4*b*).

FEMALE.—Wing length 7.9–8.6 mm. Similar to male, except as follows.

Head (fig. 3*b*): front slightly broader anteriorly, 0.38 of total width of head; anterior ommatidia 1.25 times as large as posterior ones.

Legs with f_1 bearing complete rows of long *pd* and *pv* and small group of medial *a*; t_1 with 1–2 *pd* in apical half, nearly complete row of 9–10 rather short *ad*, long apical *ad*, *pd*, and *pv*; t_3 lacking the regular palisade of *ad* of male, but with a number of irregular bristles, of which 2 near middle stand out; t_3 also with *pd* bristles a little coarser than in male, but calcar no more distinct; posterior compression and sulcus as in male.

Abdomen in general appearance much as in male; postabdomen as in figure 4*d* (ovipositor), 8th sternite consisting of 2 elongate cuneiform sclerites; spermathecae not seen.

HOLOTYPE.—Male, Malaya, Selangor Gombak Forest Reserve, tree platform, Dec. 9, 1961 (H. E. McClure); allotype, same data, Dec. 17, 1961; paratypes, same data, 1 ♂, Nov. 10, 1962, bait trap 2000'; 1 ♂, May 20, 1961; 1 ♀, Mar. 3, 1961; 1 ♀, Apr. 1, 1961; 1 ♀, June 3, 1961; 1 ♀, June 10, 1961; 1 ♀, Oct. 21, 1961; 2 ♀, Sept. 1, 1962; USNM 67824.

The relationships of this species may be gathered from the discussion preceding the description and from the following key.

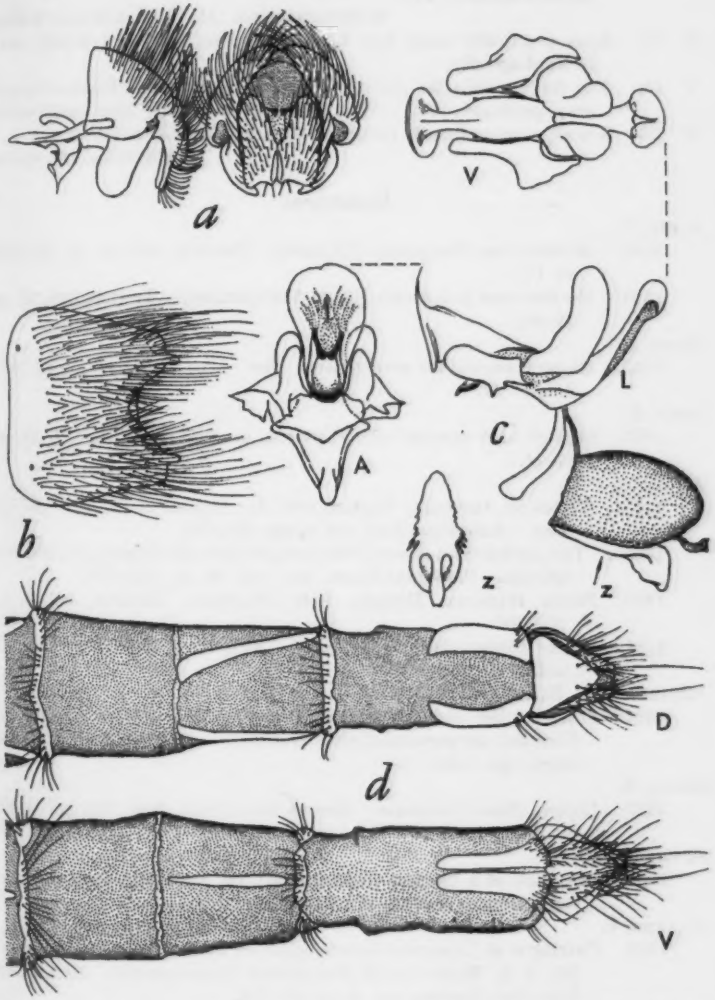

FIGURE 4.—*Fraserella altivolans*, new species: *a*, male postabdomen, lateral and posterior views; *b*, last preabdominal sternite; *c*, inner copulatory apparatus; *d*, female postabdomen (ovipositor). (Views: A=anterior, D=dorsal L=lateral, V=ventral, z=ejaculatory apodeme.)

Key to Species of *Fraserella*

1 (2). Eyes hairy; legs fulvous or orange yellow; 4th wing vein strongly bent forward apically; 4 *sc*.

F. fulvomaculata (Malloch), new combination

2 (1). Eyes practically bare; legs black; 4th wing vein very weakly bent forward apically.

3 (4). 3 *sc* (plus bristle-like posterior discal hairs); antenna black; abdomen gray pruinose . . . . . **F. corbetti** (Malloch),[3] new combination

4 (3). 5–6 *sc*; antenna basally reddish; abdomen yellowish-pruinose.

F. altivolans, new species

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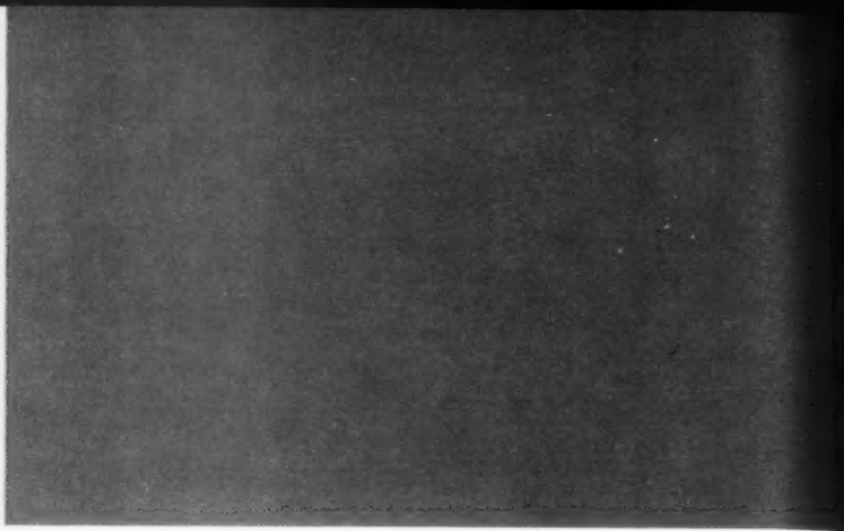
[3] Described as *Phaonia corbetti* Malloch (1931, p. 187).